

NCR-19-7664

008656
008664

Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

Deviation

SWA6A-3
Job Sheet 189885



Part No: SWA6A-3

Job Qty: 1 pcs

Part Name: Electric Swivel 6,000 lb Safe Work Load (2,721 Kg)



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 1/31/19

Job Tracking No:

Due Date: 3/7/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG SWA6A Rev. 4 IPP Rev. A 18.05.14 new issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	External Load - 1	1 pcs	3/7/19		0.00	0.00	External Load - 1		AP
							External Load - 2		
							External Load - 3		
110	External Load - 2 - B4B	1 pcs	3/7/19		0.00	2.00	External Load - 1 - B4B		AP 2019/03/14
							External Load - 2 - B4B		
							External Load - 3 - B4B		
120	QC 5	1 pcs	3/7/19		0.00	0.00	QC 5 - 10		
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 38		
							QC 5 - 42		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		
							QC 5 - 58		
							QC 5 - 68		
							QC 5 - 9		
							QC 5 - 50		
125	DC - 1 - B4B	1 pcs	3/7/19		0.00	0.00	DC - 1 - B4B		AP 2019/03/14
							DC - 2 - B4B		
130	Packaging 3-1 - Stock - B4B	1 pcs	3/7/19		0.00	0.00	Packaging 3 - 1 - B4B		
							Packaging 3 - 2 - B4B		
							Packaging 3 - 3 - B4B		
							Packaging 3 - 4 - B4B		
							Packaging 3 - 5 - B4B		



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 813 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S161520



Part: SWA6A-3

Job No: 189885

Serial No/Batch: S161520

Revision: E

Inspector:

Exp Date:

Instructions:

Date: 03/12/19

Plex 2/7/19 4:02 PM Dart.Hadley.Shannon

				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
140	QC 21 - FG	1 pcs	3/7/19	0.00 0.00	QC 21 - FG - 21
					QC 21 - FG - 70
Part Op 100 - Sheet 1 ***All assembly to be done in accordance with SWA swivel manual*** Engrave T/N And / or S/N number as Descriptions: required Using Marktronic engraver as per DWG. Laser engrave dart logo as per DWG. Small Fab-6 (Small Fab) - Assemble as per DWG. Sheet 1 ***All assembly to be done in accordance with SWA swivel manual*** Engrave T/N And / or S/N number as required Using Marktronic engraver as per DWG. Laser engrave dart logo as per DWG. 110 - Sheet 1 ***All assembly to be done in accordance with SWA swivel manual*** Engrave T/N And / or S/N number as required Using Marktronic engraver as per DWG. Laser engrave dart logo as per DWG. Small Fab-6 (Small Fab) - Assemble as per DWG. Sheet 1 ***All assembly to be done in accordance with SWA swivel manual*** Engrave T/N And / or S/N number as required Using Marktronic engraver as per DWG. Laser engrave dart logo as per DWG. 120 - (QC5- Inspect part completeness to step on W/O) Engrave T/N And / or S/N number as required Using Marktronic engraver as per DWG. 125 - DC (Document Control) Photocopy blue file OM & OOPM-SWA6A Rev2 130 - Packaging3 (Identify as per dwg & Stock Location: _____) Bag and tag 140 - (QC21- Final Inspection - Work Order Release)					

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
188-FPSS-1032-1/2	Set Screw	1 Ea (1 ea)	100-External Load - 1	
188-FSCS-1032-5/8	Set Screw	4 Ea (4 ea)	110-External Load - 2 - B4B	
C45-15-13	Bushing for SWA6A	1 Ea (1 ea)	110-External Load - 2 - B4B	
EL-PLUG-F	3-Prong Female Spade Plug	1 Ea (1 ea)	110-External Load - 2 - B4B	
EL-PLUG-M	3-Prong Male Spade Plug	1 Ea (1 ea)	110-External Load - 2 - B4B	
EL314-SJTOW	Long Line Electrical Wire, 14/3 Gauge	6 ft (6 ea)	110-External Load - 2 - B4B	
SWA6A-100	Lower End	1 pcs (1 ea)	110-External Load - 2 - B4B	
SWA6A-1100	Upper Bearing	1 pcs (1 ea)	110-External Load - 2 - B4B	
SWA6A-1200	Lower DU Bearing	1 Ea (1 ea)	110-External Load - 2 - B4B	
SWA6A-1300	Lower Thrust Bearing	1 Ea (1 ea)	110-External Load - 2 - B4B	
SWA6A-1400	Circlip Internal	1 Ea (1 ea)	110-External Load - 2 - B4B	
SWA6A-1800	Cover	1 pcs (1 ea)	110-External Load - 2 - B4B	
SWA6A-1900	1/4" Female Spade Connector	6 Ea (6 ea)	110-External Load - 2 - B4B	
SWA6A-200	Upper End	1 pcs (1 ea)	110-External Load - 2 - B4B	
SWA6A-300	Bearing Housing	1 pcs (1 ea)	110-External Load - 2 - B4B	
SWA6A-400	Thrust Washer	1 pcs (1 ea)	110-External Load - 2 - B4B	
SWA6A-500	Semi Rings	1 pcs (1 ea)	110-External Load - 2 - B4B	
SWA6A-600	Collar	1 pcs (1 ea)	110-External Load - 2 - B4B	
SWA6A-700	Wire Clamp	2 pcs (2 ea)	110-External Load - 2 - B4B	
SWA6A-800B	Connector Bushing	1 pcs (1 ea)	110-External Load - 2 - B4B	
SWA6A-900B	Rotary Connector - 3 wire	1 Ea (1 ea)	110-External Load - 2 - B4B	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-External Load - 1	188-FPSS-1032-1/2	1	63	0
110-External Load - 2 - B4B	188-FSCS-1032-5/8	4	154	0
	C45-15-13	1	21	0
	EL-PLUG-F	1	21	0
	EL-PLUG-M	1	35	0
	EL314-SJTOW	6	598	0
	SWA6A-100	1	2	0
	SWA6A-1100	1	28	0
	SWA6A-1200	1	12	0
	SWA6A-1300	1	15	0
	SWA6A-1400	1	19	0
	SWA6A-1800	1	12	0
	SWA6A-1900	6	323	0
	SWA6A-200	1	5	0
	SWA6A-300	1	7	0
	SWA6A-400	1	8	0
	SWA6A-500	1	0	0
	SWA6A-600	1	12	0
	SWA6A-700 ^B	2	15	0
	SWA6A-800B	1	16	0
	SWA6A-900B	1	15	0
	<i>027281</i>	<i>1</i>		

Part Specifications

Specifications could not be found.

Plex 2/7/19 4:02 PM Dart.Hadley.Shannon



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

SWA6A-3
Job Sheet 189885



Part No: SWA6A-3

Job Qty: 1 pcs

Part Name: Electric Swivel 6,000 lb Safe Work Load (2,721 Kg)



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 1/31/19

Job Tracking No:

Due Date: 3/7/19

Created By: Marie Lajeunesse

Type: SOLD

Description: order 13147

Note: DWG SWA6A Rev. 4 IPP Rev. A 18.05.14 new issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
110	Small Fab - 1	1 pcs	3/7/19		0.00	2.00	Small Fab - 1		
							Small Fab - 2		
							Small Fab - 3		
							Small Fab - 4		
							Small Fab - 5		
							Small Fab - 6		
							Small Fab - 7		
120	QC 5	1 pcs	3/7/19		0.00	0.00	QC 5 - 10		
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 38		
							QC 5 - 42		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		
							QC 5 - 58		
							QC 5 - 68		
							QC 5 - 9		
							QC 5 - 50		
							QC 5 - 30		
125	DC - 1 - B4B	1 pcs	3/7/19		0.00	0.00	DC - 1 - B4B		
							DC - 2 - B4B		
130	Packaging 3-1 - Stock - B4B	1 pcs	3/7/19		0.00	0.00	Packaging 3 - 1 - B4B		
							Packaging 3 - 2 - B4B		
							Packaging 3 - 3 - B4B		
							Packaging 3 - 4 - B4B		

Plex 1/31/19 1:33 PM Dart.lajeunesse.marie

				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
140	QC 21 - FG	1 pcs	3/7/19	0.00 0.00	QC 21 - FG - 21
					QC 21 - FG - 70
Part Op 110 - Sheet 1 ***All assembly to be done in accordance with SWA swivel manual*** Engrave T/N And / or S/N number as Descriptions: required Using Marktronic engraver as per DWG. Laser engrave dart logo as per DWG. Small Fab-6 (Small Fab) - Assemble as per DWG. Sheet 1 ***All assembly to be done in accordance with SWA swivel manual*** Engrave T/N And / or S/N number as required Using Marktronic engraver as per DWG. Laser engrave dart logo as per DWG. 120 - (QC5- Inspect part completeness to step on W/O) Engrave T/N And / or S/N number as required Using Marktronic engraver as per DWG. 125 - DC (Document Control) Photocopy blue file OM & OOPM-SWA6A Rev2 130 - Packaging3 (Identify as per dwg & Stock Location: _____) Bag and tag 140 - (QC21- Final Inspection - Work Order Release)					

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
188-FPSS-1032-1/2	Set Screw	1 Ea (1 ea)	110-Small Fab - 1	5037083
188-FSCS-1032-5/8	Set Screw	4 Ea (4 ea)	110-Small Fab - 1	5047611
C45-15-13	Bushing for SWA6A	1 Ea (1 ea)	110-Small Fab - 1	5068052
EL-PLUG-F	3-Prong Female Spade Plug	1 Ea (1 ea)	110-Small Fab - 1	5120461
EL-PLUG-M	3-Prong Male Spade Plug	1 Ea (1 ea)	110-Small Fab - 1	5097888
EL314-SJTOW	Long Line Electrical Wire, 14/3 Gauge	6 ft (6 ea)	110-Small Fab - 1	5159114
SWA6A-100	Lower End	1 pcs (1 ea)	110-Small Fab - 1	5159346
SWA6A-1100	Upper Bearing	1 pcs (1 ea)	110-Small Fab - 1	5128642
SWA6A-1200	Lower DU Bearing	1 Ea (1 ea)	110-Small Fab - 1	5044605
SWA6A-1300	Lower Thrust Bearing	1 Ea (1 ea)	110-Small Fab - 1	5105372
SWA6A-1400	Circlip Internal	1 Ea (1 ea)	110-Small Fab - 1	5045017
SWA6A-1800	Cover	1 pcs (1 ea)	110-Small Fab - 1	5098582
SWA6A-1900	1/4" Female Spade Connector	6 Ea (6 ea)	110-Small Fab - 1	5027243
SWA6A-200	Upper End	1 pcs (1 ea)	110-Small Fab - 1	5159506
SWA6A-300	Bearing Housing	1 pcs (1 ea)	110-Small Fab - 1	5160926
SWA6A-400	Thrust Washer	1 pcs (1 ea)	110-Small Fab - 1	5133694
SWA6A-500	Semi Rings	1 pcs (1 ea)	110-Small Fab - 1	5153196
SWA6A-600	Collar	1 pcs (1 ea)	110-Small Fab - 1	5148661
SWA6A-700	Wire Clamp	2 pcs (2 ea)	110-Small Fab - 1	5155660
SWA6A-800B	Connector Bushing	1 pcs (1 ea)	110-Small Fab - 1	5094846
SWA6A-900B	Rotary Connector - 3 wire	1 Ea (1 ea)	110-Small Fab - 1	5148632

GREASE AEROSHELL NO.7 (M138724)
SILICONE GE (M138994)

LOCTITE 242 (M138766)
LOCTITE 620 (M138933)

SAF-T-EZE (M128063)

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
110-Small Fab - 1	188-FPSS-1032-1/2	1	63	0
	188-FSCS-1032-5/8	4	154	0
	C45-15-13	1	21	0
	EL-PLUG-F	1	21	0
	EL-PLUG-M	1	35	0
	EL314-SJTOW	6	598	0
	SWA6A-100	1	2	0
	SWA6A-1100	1	28	0
	SWA6A-1200	1	12	0
	SWA6A-1300	1	15	0
	SWA6A-1400	1	19	0
	SWA6A-1800	1	12	0
	SWA6A-1900	6	323	0
	SWA6A-200	1	6	0
	SWA6A-300	1	7	0
	SWA6A-400	1	8	0
	SWA6A-500	1	0	0
	SWA6A-600	1	12	0
	SWA6A-700	2	15	0
	SWA6A-800B	1	16	0
	SWA6A-900B	1	5	0

Part Specifications

Specifications could not be found.

GREASE AEROSHELL NO.7 (M138724)
SILICONE GE (M128063)
LOCTITE 242 (M138933)
LOCTITE 620 (M138933)
SAF-T-EZE (M139008)

Plex 1/31/19 1:33 PM Dart.lajeunesse.marie

Work Order 189885

Customer 13147

Number of Wires 3

Date 2019-3-13

Serial Number 5161520

Number of Cycles	Load (Lbs.)	Action	Pass/Fail
1	6,000	Check for Conductivity against all wires.	-
1	6,000	Check all wires for grounding against swivel body.	-
1	3,000	Check for Conductivity against all wires.	-
1	3,000	Check all wires for grounding against swivel body.	-
1	1,500	Check for Conductivity against all wires.	-
1	1,500	Check all wires for grounding against swivel body.	-
1	0	Check for Conductivity against all wires.	-
1	0	Check all wires for grounding against swivel body.	-

Test Conducted By: Michel Lalonde

Technician



Signature: Sylvain Poirier
QC 5 Small FAB / QA

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: <u>189885</u> Part No. <u>SWA### Swivels</u> NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-Is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																				
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																				
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																				
Large Fab ☐	Composite ☐	Supplier ☐																																																																					
Date: <u>2019/03/14</u>		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval <i>M. Lee</i> Feb 01, 2018																																																																	
Description Work Order Deviation - Use a combination of heatshrink tubing and RTV Silicone to create a watertight seal around all electrical connections. - Use a D2728-1 Placard in place of the laser engraved Dart logo				Disposition These deviations are acceptable to carry out on the following swivels: - SWA3 - SWA6A - SWA10A - SWA15A - SWA25A - PSWA25A There is no impact on fit, form or function.				Completed By <u>A. PATRY</u> Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval <u>68</u> JUL 26 2019																																																															
Root Cause <table style="width:100%;"> <tr> <td>Environment ☐</td> <td>No Re-verification ☐</td> </tr> <tr> <td>Design ☒</td> <td>Operator ☐</td> </tr> <tr> <td>Doc/Data ☐</td> <td>Offset/Setup ☐</td> </tr> <tr> <td>Equip/Tooling ☐</td> <td>Supplier ☐</td> </tr> <tr> <td>Handling/Pre ☐</td> <td>Training ☐</td> </tr> <tr> <td>Material ☐</td> <td>Use for Testing ☐</td> </tr> <tr> <td>Internal Transport ☐</td> <td>Poor Information ☐</td> </tr> <tr> <td>Tribal Knowledge ☐</td> <td>Rushing ☐</td> </tr> <tr> <td>LOA ☐</td> <td>☒ Product Improvement</td> </tr> <tr> <td>Substation ☐</td> <td>☒ Process Improvement</td> </tr> <tr> <td>Past Expiry Date ☐</td> <td>Manufacturing Process ☐</td> </tr> <tr> <td>Misidentified ☐</td> <td>Past Due ☐</td> </tr> </table>		Environment ☐	No Re-verification ☐	Design ☒	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	☒ Product Improvement	Substation ☐	☒ Process Improvement	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width:100%;"> <tr> <td>Pressure/Forced ☐</td> <td>Temperature/Cure ☐</td> <td>Power Loss/Surge ☐</td> <td>Positioned Wrong ☐</td> </tr> <tr> <td>Bending ☐</td> <td>Set-up ☐</td> <td>Folio/Program ☐</td> <td>Outside Dimensions ☐</td> </tr> <tr> <td>Centre Not Concentric ☐</td> <td>BOM/Route ☐</td> <td>Grain ☐</td> <td>Over/Under tolerance ☐</td> </tr> <tr> <td>Cracks ☐</td> <td>Broken/Damage/Defect ☐</td> <td>Weld ☐</td> <td>Part Incorrect ☐</td> </tr> <tr> <td>Crimp/Kink/Ripple/Wave ☐</td> <td>Inspection Incomplete/Unqualified ☐</td> <td>Wrong Stock Pulled ☐</td> <td>Part Lost/Missing ☐</td> </tr> <tr> <td>Cuffs ☐</td> <td>Contamination ☐</td> <td>Out of Sequence ☐</td> <td>Part Moved ☐</td> </tr> <tr> <td>Crushing ☐</td> <td>Countersink ☐</td> <td>Off-set ☐</td> <td>Drawing ☐</td> </tr> <tr> <td>Heat Treat ☐</td> <td>Cut Too Short ☐</td> <td>Mislabeled ☐</td> <td>Finish ☐</td> </tr> <tr> <td>Wave/Twist in Tube ☐</td> <td>Instructions Incomplete/Unclear ☐</td> <td>Fit/Function ☐</td> <td>Misread ☐</td> </tr> <tr> <td>Marks/Chatter ☐</td> <td>Drill Holes ☐</td> <td>Misaligned/off center ☐</td> <td>Turning Sequence ☐</td> </tr> </table>						Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐																																																																						
Design ☒	Operator ☐																																																																						
Doc/Data ☐	Offset/Setup ☐																																																																						
Equip/Tooling ☐	Supplier ☐																																																																						
Handling/Pre ☐	Training ☐																																																																						
Material ☐	Use for Testing ☐																																																																						
Internal Transport ☐	Poor Information ☐																																																																						
Tribal Knowledge ☐	Rushing ☐																																																																						
LOA ☐	☒ Product Improvement																																																																						
Substation ☐	☒ Process Improvement																																																																						
Past Expiry Date ☐	Manufacturing Process ☐																																																																						
Misidentified ☐	Past Due ☐																																																																						
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																				
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																				
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																				
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																				
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																				
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																				
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																																				
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																				
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																				
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																				
OTHER : _____																																																																							

Oct 31/19



19-7664

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only

Job: 189885		DISPOSITION		DEPARTMENT/PROCESS							
Part No. SWA6A-3		Rework ☐ Scrap ☐ Use-as-is ☐		Skid-tube ☐ Machining ☐ Large Fab ☐		Cross tube ☐ Small Fab ☐ Finishing ☐		Eng. (Non-AW) ☒ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐		Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐	
Date: 2019/03/27		Sequence #:		QTY Affected: 1				MRB (QSI042) March 27, 2019 M Lee			
Description Work Order Deviation				Disposition				Completed By A. PATRY 1967-26			
Installed SWA6A-700 in place of SWA6A-700B.				This deviation is acceptable. The fit, form and function of the SWA6A-700 has been evaluated for this install and is acceptable. Ref: 14/3 wire 01004-08-047 is functionally identical to 001121-734A5				Lead hand / Supervisor DAS 30 9-89 JUL 26 2019			
Root Cause				QC / QA Coordinator DAS 68 9-89 JUL 26 2019							
Operator ☐ Manufacturing Process ☒ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐		Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐		Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☒ Finish ☐ Part Lost/Missing ☐ Misread ☐			
		Other/Details: Tolerance stack up errors on Rev. 2A drawing (plating thickness and 0.4990-0.4987)									